

1748  
2000  
50000L

# ONONDAGA LAKE IMPROVEMENT PROJECT

ONONDAGA COUNTY DEPARTMENT OF DRAINAGE AND SANITATION

650 Hiawatha Boulevard West • Syracuse, New York 13204-1194

315/435-2260 Phone • 315/435-5023 FAX



NICHOLAS J. PIRRO, *County Executive*  
RICHARD L. ELANDER, P.E., *Commissioner*

MICHAEL J. CUNNINGHAM, *Director*  
SUSAN A. MILLER, *Deputy Director*

12/6/00

John P. Cahill, Commissioner  
NYS Department of Environmental Conservation  
50 Wolf Road  
Albany, NY 12233-1750

Re: Onondaga County Lake Improvement Project  
Stage III Ammonia/Stage II Phosphorus Removal Project  
SEQRA Environmental Assessment Form Submission

Onondaga County has undertaken a SEQRA review of the Stage III Ammonia/Stage II Phosphorus Removal Project which involves the:

- Construction and operation of Biological Aerated Filter technology to reduce ammonia concentrations in Metropolitan Syracuse Wastewater Treatment Plant (Metro) effluent;
- Construction and operation of High-Rate Flocculated Settling technology to reduce phosphorus concentrations in Metro effluent;
- Construction and operation of Ultraviolet disinfection facilities to provide for secondary/tertiary disinfection.

The Onondaga County Legislature at their meeting of December 4, 2000 approved a resolution confirming the County's lead agency status (resolution attached). The final SEQRA action will be requested at the February 5, 2001 Session of the Onondaga County Legislature.

Also, the County has submitted a draft Environmental Information Document (EID) to USEPA for their use in preparing an Environmental Assessment (EA) and Finding of No Significant Impact (FNSI). Part III of the enclosed SEQRA submission excerpts from and summarizes the EID. The County expects that USEPA will complete the EA and draft FNSI in the first quarter 2001.

Onondaga County Department of Drainage and Sanitation  
Lake Improvement Project Office

A handwritten signature in cursive script, reading "Michael J. Cunningham".

Michael J. Cunningham  
Director

NY  
Orig  
Scanned

December 4, 2000

12  
00350

Motion Made By Mr. Ryan

RESOLUTION NO.

DECLARING THE COUNTY OF ONONDAGA TO BE LEAD AGENCY UNDER THE STATE ENVIRONMENTAL QUALITY REVIEW ACT (SEQRA) AND THE REVOLVING LOAN FUND STATE ENVIRONMENTAL REVIEW PROCESS (SERP), DECLARING THE ACTION TO BE CLASSIFIED AS A TYPE I ACTION UNDER SEQRA AND UNDER SERP, AND AUTHORIZING THE PUBLICATION, CIRCULATION OF THESE DECLARATIONS, AND FILING OF THE ENVIRONMENTAL ASSESSMENT FORM FOR THE STAGE III AMMONIA AND STAGE II PHOSPHOROUS REMOVAL PROJECT RELATED TO THE ONONDAGA LAKE AMENDED CONSENT JUDGMENT (ACJ)

WHEREAS, the County of Onondaga is undertaking the Stage III Ammonia and Stage II Phosphorous Removal Project (Project) pursuant to, and in compliance with, the Onondaga Lake Amended Consent Judgment (ACJ); and the purpose of the Project is to comply with the effluent limits for ammonia and phosphorus prescribed by the ACJ through the construction of specialized wastewater treatment facilities for the removal of ammonia and phosphorous; and

WHEREAS, the ACJ milestone for the start of construction of the Stage II Ammonia Removal Project is October 1, 2001 and the ACJ milestone for the start of construction of the Stage III Ammonia Removal Project is April 1, 2011; and the ACJ milestone for the start of construction of the Stage II Phosphorus Removal Project is October 1, 2003 and the ACJ milestone for the start of construction of the Stage III Phosphorus Removal Project is April 1, 2011; and

WHEREAS, the County is accelerating the schedule for Stage III Ammonia Removal by ten years and Stage II Phosphorus Removal by two years to coincide with the Stage II Ammonia Removal Project milestone and combining the construction of three primary facilities on one site including ammonia removal, phosphorus removal and ultraviolet (UV) effluent disinfection; and

WHEREAS, the proposed Project will also require the acquisition of Niagara Mohawk Power Corporation property at Hiawatha Boulevard West necessary for the construction and operation of the new facilities and will result in partial (but significant) remediation of Niagara Mohawk's former gas manufacturing plant site on Hiawatha Boulevard; and

WHEREAS, an analysis of the potential environmental impacts has been conducted pursuant to the State Environmental Quality Review Act (SEQRA) and the State Environmental Review Process (SERP); and pursuant to SEQRA and its implementing regulations, Onondaga County and NYSDEC are the only Involved Agencies; and County representatives have consulted with NYSDEC and determined that it is appropriate for Onondaga County to declare itself as Lead Agency in this matter; and the County has determined that the pending action should be classified as Type I pursuant to SEQRA and SERP and their implementing regulations; and

WHEREAS, this proposed Project will have significant beneficial impacts on the water quality of Onondaga Lake, and by combining the Stage III Ammonia and Stage II Phosphorous Removal and UV disinfection facilities, significant cost savings will be realized; now, therefore be it

RESOLVED, that in connection with the Project, the County of Onondaga hereby confirms and declares itself as Lead Agency pursuant to SEQRA, and as Lead Agency confirms and declares the proposed action is a Type I Action under SEQRA and SERP; and, be it further

RESOLVED, that the declaration of Lead Agency and Type I Action along with the Long Environmental Assessment Form (LEAF) and related documents prepared for the Project be published in the NYSDEC Environmental Notice Bulletin; and, be it further

RESOLVED, that the Onondaga County Executive, or his designee, is authorized to take such action to comply with the requirements of SEQRA and SERP, including the publication and circulation of the Lead Agency Declaration and the Type I Action Declaration, the circulation and filing of the Long Environmental Assessment Form and related documents and to take any other actions to implement the intent of this resolution.

NMSEQR.res  
JC/LIPO  
jr



I HEREBY CERTIFY THAT THE FOREGOING IS A TRUE AND  
EXACT COPY OF LEGISLATION DULY ADOPTED BY THE  
COUNTY LEGISLATURE OF ONONDAGA COUNTY ON THE  
24th DAY OF December, 2000.

CLERK COUNTY LEGISLATURE

ONONDAGA COUNTY, NEW YORK

*Nancy J. Staken*

4.1  
Sect. 4

## Financial Program: Onondaga Lake Plan

### Construction Cost Estimates

---

- Constant Dollars and Inflation  
Adjusted
- Base Case and Potential Second Filter



## Estimated Construction Costs

### Base Case, Constant Dollars

---

1998	\$16.8	2005	\$17.2
1999	\$25.8	2006	\$18.2
2000	\$27.8	2007	\$ 0.8
2001	\$80.8	2008	\$ 3.5
2002	\$66.5	2009	\$ 5.7
2003	\$53.2	2010	\$ 5.7
2004	\$51.9	<u>2011</u>	<u>\$ 5.7</u>
		Total	\$379.6

## Impact of Inflation

### Base Case

---

<u>Inflation Rate</u>	<u>Total Cost</u>
0% (Constant \$)	\$379.6
	\$404.8
2%	\$431.7
3%	\$460.4
4%	\$491.1
	\$523.8
	\$558.8

## Construction Costs

Constant Dollars, With Potential Filter

1998	\$16.8	2005	\$17.2
1999	\$25.8	2006	\$18.2
2000	\$27.8	2007	\$ 0.8
2001	\$80.8	2008	\$ 3.5
2002	\$66.5	2009	\$27.4
2003	\$53.2	2010	\$27.4
2004	\$51.9	<u>2011</u>	<u>\$27.4</u>
		Total	\$444.6

## Impact of Inflation

With Second Filter

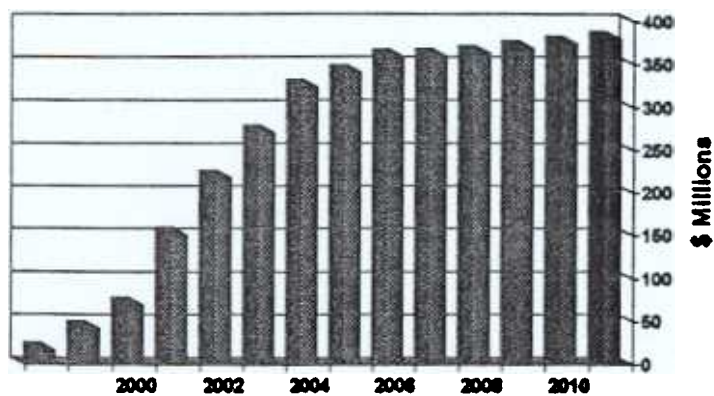
<u>Inflation Rate</u>	<u>Total Cost</u>
0% (Constant \$)	\$444.6
	\$479.5
	\$517.5
	\$558.8
	\$603.7
	\$652.6
	\$705.9



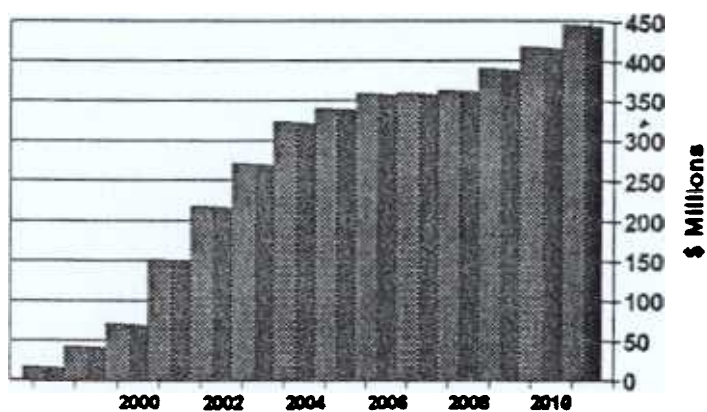
## Sources of Funds

## Sources of Funds

- **New York State**
  - Direct Grants
  - Interest Subsidies
- **Federal Government**
  - Direct Grants
- **Consolidated Sanitary District  
Ratepayers**



## Cumulative Construction Spending, With Potential Second Filter, Constant Dollars



**Estimated Increase in Unit Charge, Constant Dollars,  
\$0 and \$260 Million in Aid**

Year	Aid of \$260 Mil.	Aid of \$0
1997	-	-
1998	\$ 8	\$ 13
1999	14	26
2000	19	38
2001	31	71
2002	41	99
2003	49	121
2004	56	143
2005	59	150
2006	61	157
2007	97	193
2008	97	195
2009	98	197
2010	99	199
2011	99	201
2012	100	202
2013	100	202
2014	100	202
2015	100	202
2016	100	202
2017	100	202

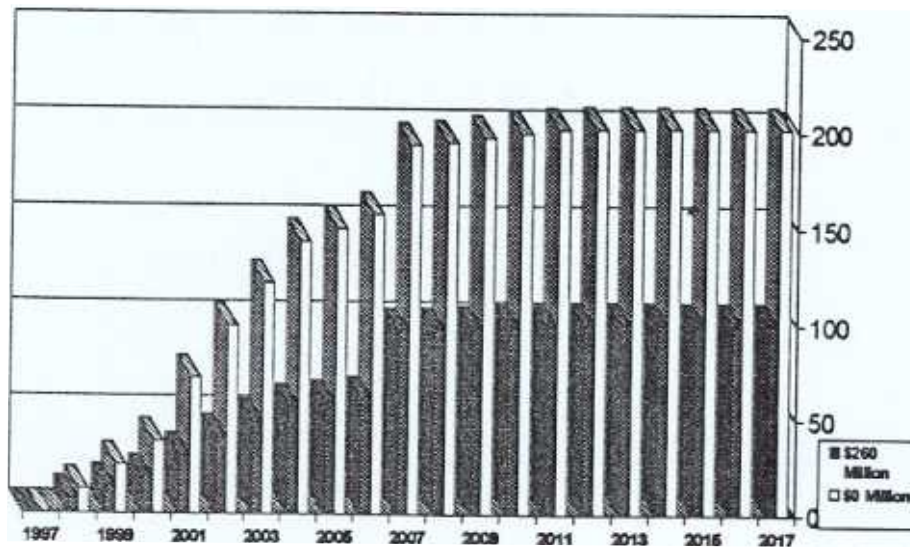
**With Aid:**

After 5 Years +\$ 41

After 10 Years +\$ 97

After 20 Years +\$100

**Estimated Increase in Unit Charges, Constant  
Dollars, Aid of \$0 and \$260 Million**

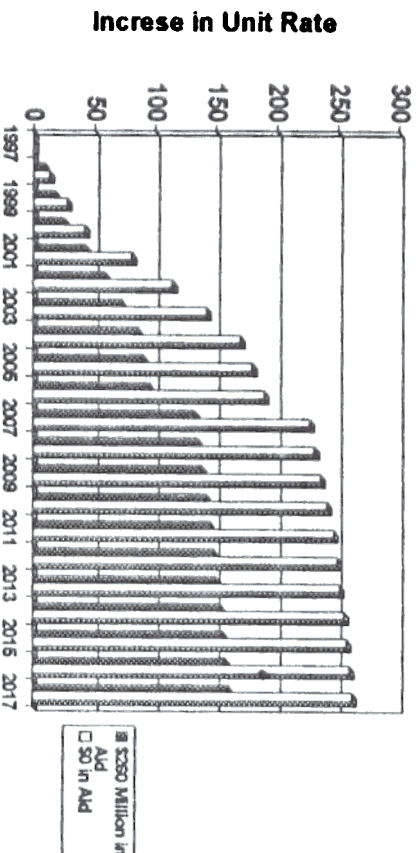


## Estimated Increase in Unit Charges, 3% Inflation, Aid of \$0 and \$260 Million

Year	Aid of \$250 MIL.	Aid of \$0
1997	-	-
1998	\$ 9	\$ 13
1999	17	28
2000	25	42
2001	43	81
2002	59	114
2003	72	142
2004	86	171
2005	91	180
2006	95	190
2007	133	228
2008	135	232
2009	139	237
2010	142	242
2011	145	247
2012	148	250
2013	150	252
2014	153	255
2015	156	258
2016	158	259
2017	160	262

**With Aid:**  
After 5 Years +\$ 59  
After 10 Years +\$133  
After 20 Years +\$160

## Estimated Increase In Unit Charge, 3% Inflation, Aid of \$0 and \$260 Million

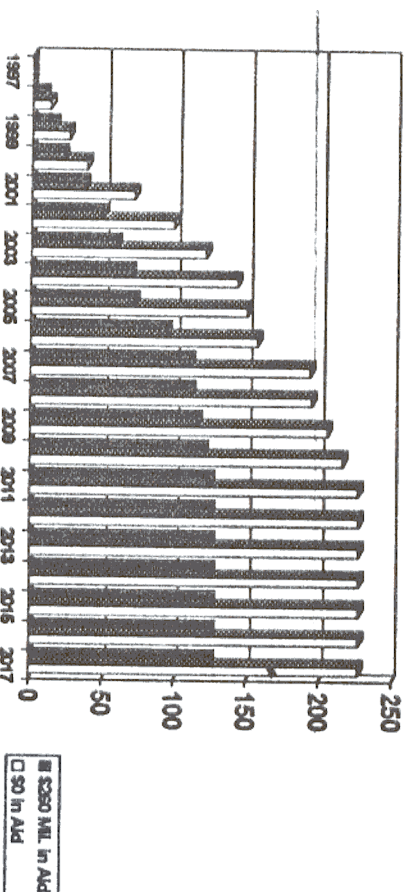




Year	Aid of \$250 Mil.	Aid of \$0
1997	.	.
1998	\$ 9	\$ 13
1999	16	26
2000	22	38
2001	37	71
2002	48	98
2003	59	121
2004	69	143
2005	72	150
2006	76	167
2007	111	193
2008	112	196
2009	116	206
2010	120	216
2011	126	227
2012	126	227
2013	126	227
2014	126	227
2015	126	227
2016	126	227
2017	126	227

With Aid:  
 After 5 Years +\$ 49  
 After 10 Years +\$111  
 After 20 Years +\$125

# Estimated Increase in Unit Charge, Constant Dollars, Aid of \$0 and \$260 Million, With Potential Second Filter



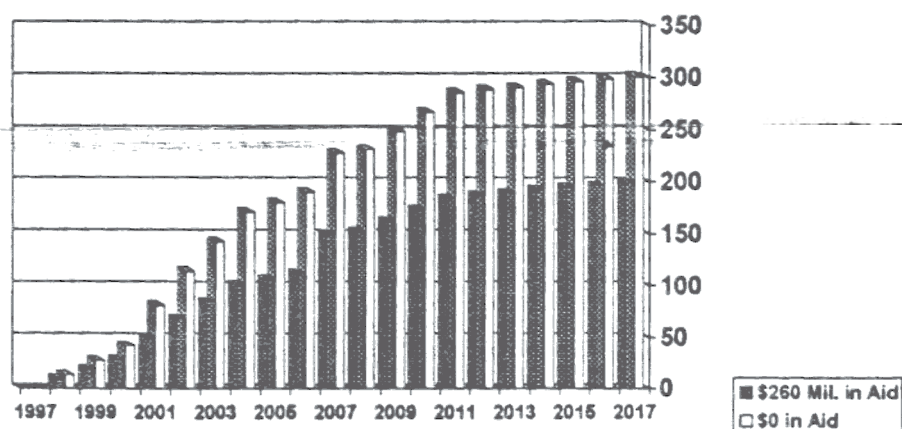
**Estimated Unit Charge Increase, % Inflation, Aid of \$0 and \$260 Million, With Potential Second Filter**

	Aid of \$260 Mil.	Aid of \$0
1997	-	-
1998	\$ 10	\$ 13
1999	19	28
2000	28	42
2001	50	81
2002	69	114
2003	85	142
2004	101	171
2005	108	180
2006	112	190
2007	149	228
2008	152	232
2009	162	249
2010	173	267
2011	184	286
2012	187	288
2013	189	291
2014	192	294
2015	194	296
2016	197	299
2017	199	301

**With Aid**

After 5 Years +\$ 69  
 After 10 Years +\$149  
 After 20 Years +\$199

**Estimated Impact on Unit Charge, 3% Inflation, Aid of \$0 and \$260 Million, With Potential Second Filter**





## Most Likely Scenario

---

- Moderate Inflation (Average of 3%)
- \$260 Million in Aid
- Timing of Aid Matches Spending
- **No Second Filter**

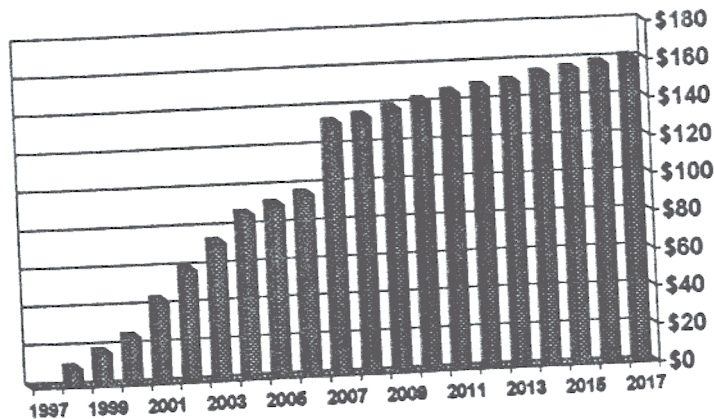
## Projected Increase in Unit Charge

3% Inflation, \$260 Million in Aid, No Second Filter

Est. Unit	
Year	Charge Increase
1997	-
1998	\$ 9
1999	17
2000	25
2001	43
2002	59
2003	72
2004	86
2005	91
2006	95
2007	133
2008	135
2009	139
2010	142
2011	145
2012	148
2013	150
2014	153
2015	156
2016	158
2017	160

After 5 Years +\$ 59  
After 10 Years +\$133  
After 20 Years +\$160

## Projected Increase in Unit Charge



Assumes average annual inflation of 3%, \$260 million in State and Federal  
No Second Filter

## Projected Annual Increases in Unit Charge

1998	\$ 9.36	2008	\$ 2.63
1999	\$ 8.08	2009	\$ 3.26
2000	\$ 7.50	2010	\$ 3.36
2001	\$18.14	2011	\$ 3.46
2002	\$15.86	2012	\$ 2.58
2003	\$13.48	2013	\$ 2.08
2004	\$13.66	2014	\$ 3.41
2005	\$ 4.46	2015	\$ 2.25
2006	\$ 4.82	2016	\$ 2.31
2007	\$37.30	2017	\$ 2.38

## New York State Aid

---

- Direct Grants
  - \$75 Million - Environmental Bond
  - \$85 Million - Annual Appropriations
  - \$160 Million - Total NYS Commitment
- Interest Rate Subsidy
  - 50% Rate Subsidy/Long Term Financing
  - Interest Free Construction Loans

## Federal Government

---

- \$25 Million Already Appropriated
- \$75 Million Pledged/Annual Appropriations

# District Ratepayers

## Unit Charge Analysis

### Unit Charge Analysis

---

- Elements:
    - Levels and Timing of Aid
    - Estimates of Inflation
    - Rates of Interest
    - Capital Costs
    - O&M Costs
-

LV48

Solo d



COUNTY OF ONONDAGA  
**OFFICE OF THE COUNTY EXECUTIVE**

NICHOLAS J. PIRRO  
COUNTY EXECUTIVE

EDWARD KOCHIAN  
DEPUTY COUNTY EXECUTIVE

MARTIN A. FARRELL  
EXECUTIVE COMMUNICATIONS DIRECTOR

JOHN H. MULROY CIVIC CENTER

421 MONTGOMERY STREET - 14TH FLOOR  
SYRACUSE, NEW YORK 13202-2995

315 - 435-3516  
TELECOPIER: 315 - 435-8582

JAMES A. ALBANESE  
ADMINISTRATOR - PHYSICAL SERVICES

LYNN A. SHEPARD  
ADMINISTRATOR - HUMAN SERVICES

SUSAN J. TORMEY  
RESEARCH & COMMUNICATIONS OFFICER

August 21, 1997

Chairman and Honorable Members of the Onondaga County Legislature:

**RE: Onondaga Lake**  
**FOR YOUR IMMEDIATE ATTENTION / ACTION**

I am hereby submitting for your approval an agreement and plan to address wastewater treatment impacts on Onondaga Lake. The enclosed consent agreement replaces the 1989 order authorized by the then seated Legislature.

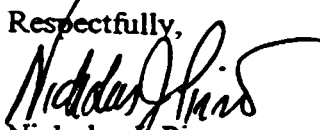
I am pleased to say that an agreement with all the parties (State, County, ASLF, with the concurrence of USEPA) has been reached. The agreement takes into consideration your 1995 policy resolution and the agreement includes a build and measure approach. In addition, the Governor recognizes that the upgrades and other work required under this agreement will place a significant financial burden on the County and he will endeavor to work with the County to obtain state and federal financial assistance.

Your enactment of a resolution authorizing me to execute the negotiated agreement will eliminate the need for further litigation and risk more draconian impacts on the County.

Timely action is required (30 days) in order obviate the need for a protracted and costly court battle with all the above parties as our adversaries.

I stand ready with all the members of our negotiating team to assist in your deliberations.

Respectfully,

  
Nicholas J. Pirro  
County Executive



LH

DEPARTMENT OF DRAINAGE AND SANITATION

650 HIAWATHA BOULEVARD, WEST  
SYRACUSE, NEW YORK 13204-1194

TEL: 315/435-2260  
315/435-6820  
FAX: 315/435-5023

NICHOLAS J. PIRRO  
COUNTY EXECUTIVE

JOHN M. KARANIK  
COMMISSIONER

Onondaga County Public Library

**SUBJECT:** Proposed Onondaga Lake Settlement

**DATE:** August 29, 1997

Attached please find the following documents:

Summary of the Proposed Onondaga Lake Settlement

2. Amended Consent Judgment for the Metropolitan Syracuse Wastewater Treatment Plant and Combined Sewer Overflows

Would you please make these documents available for public review. Thank you.

Sincerely,

A handwritten signature in cursive script that reads "Randy R. Ott".

Randy R. Ott, P.E.  
Process Control Director

# **SUMMARY OF THE PROPOSED ONONDAGA LAKE SETTLEMENT**

## **BACKGROUND AND INTRODUCTION**

The proposed settlement agreement (formally referred to as the Amended Consent Judgment) stems from a 1989 Judgment on Consent settling litigation between the State of New York, the Atlantic States Legal Foundation and the County. The provisions of the proposed Agreement resolve a number of controversies that grew out of the 1989 Consent Decree, and takes the place of what historically has been referred to as the "Municipal Compliance Plan" (MCP).

The proposed Agreement reflects, to a large extent, the objectives established by a policy resolution passed by the County Legislature in 1995 (Resolution 95-158) which was intended to guide negotiators in developing the Municipal Compliance Plan. The principles outlined in the policy resolution call for a plan based on the "phased implementation" of the various upgrades to the Metropolitan sewage treatment plant (Metro) and Combined Sewer Overflows (CSOs), and the actual measurement of water quality improvements to the lake resulting from each phase of construction prior to proceeding with the next phase.

The Policy Resolution also emphasized the importance of obtaining non-local funding assistance as a means of reducing the impact of the Compliance Plan on sewer use charges and the local economy. While it is not legally possible to include a binding commitment of Federal and State financial aid within the Agreement, the proposed settlement does contain a pledge by the State to "endeavor... to obtain state financial assistance to help the County meet its obligations under the Amended Consent Judgment."

As described more fully below, the proposed Agreement represents a substantial improvement over the 1989 Order it replaces in that it:

- clarifies the County's future obligations, eliminating what has been a source of uncertainty and allowing for more reliable long-term planning, and;
- spells out clearly the rights and obligations of the respective parties (the County, the State, the Environmental Protection Agency and Atlantic States Legal Foundation), which will minimize the potential for future litigation and expense.

## **KEY PROVISIONS OF THE AGREEMENT**

The Agreement is designed to achieve full compliance with the Clean Water Act by December 1, 2012. Consistent with the County Legislature's policy resolution, it outlines a fifteen (15) year schedule of phased upgrades to Metro and the CSOs, and it requires an extensive water quality monitoring program for Onondaga Lake, its tributaries and the

Seneca River to measure water quality improvements associated with each phase of the plan. Key features of the agreement include:

### **METRO PHASE I**

- Calls for a "no net increase" on existing effluent limits for ammonia discharged from Metro until May 1, 2004;
- Calls for a "no net increase" on existing effluent limits for phosphorus discharged from Metro until April 1, 2006

### **METRO PHASE II**

- Beginning no later than May 1, 2004 Metro must meet an interim ammonia effluent limit of 2 milligrams per liter (mg/l) in the summer and 4 mg/l in the winter, measured as a 30-day average. To meet this limit an ammonia filtration facility will be constructed at an approximate cost of \$125 million;
- Beginning no later than April 1, 2006 Metro must meet an interim phosphorus limit of .12 mg/l, measured as an average over a twelve month period. To meet this limit a single pass phosphorus filtration facility must be constructed at an approximate cost of \$65 million.

### **METRO PHASE III**

The effluent limits established for Phase III have been based on the assumption that the current water quality standards for the lake will not be met by the Phase II projects described above. The limits are based on calculations of acceptable waste loads to the lake, and have been determined by the State Department of Environmental Conservation (DEC) using their best professional judgment after making use of water quality models developed by the Upstate Freshwater Institute and analyzing current water quality data.

Before Phase III construction begins, the State anticipates revising its calculations for acceptable waste loads to the lake. Scheduled to occur no later than February 1, 2009, these revisions would be based in part on an assessment of the impacts of the Phase II projects on the lake as measured by the on-going monitoring program. The DEC is also planning to revise its ammonia standards in the near future. The State's existing ammonia standards are based on EPA's 1984 criteria document. In 1992 and 1995 EPA revised its ammonia criteria, and further revision to the ammonia criteria are now under consideration by EPA. The DEC is awaiting the results of EPA's current review of the ammonia standard before initiating its ammonia standards modification process.

As with the ammonia standard, DEC is committed to a review of the appropriateness of the phosphorus guidance value for Onondaga Lake by February 1, 2009 before Phase III construction begins.



In the event existing standards and allowable waste load calculations are not revised as a consequence of the review described above, Phase III of the plan will require the following:

- No later than December 1, 2012 Metro will be required to meet a final effluent limit for ammonia of 1.2 mg/l in the summer and 2.4 mg/l in the winter, measured as a 30-day average.
- No later than December 1, 2012 Metro will be required to meet a final effluent limit for phosphorus of .02 mg/l.

The cost for upgrades to meet these limits, which may require an additional filter or a pipeline to divert the Metro discharge to the Seneca River, is estimated at \$65 million. Before making a decision on whether to divert the Metro discharge to the Seneca River the State will be required to calculate allowable waste loads and determine effluent limits that will not violate the water quality standards for that body of water.

It should be noted that effluent filtration and other projects required as part of the Phase II schedule as necessary for either continued discharge into Onondaga Lake or a future discharge to the Seneca River.

## **CSO PLAN**

The CSO program will consist of a number of projects that have as their goal the elimination or substantial reduction of floatable solids from CSOs into Onondaga Lake and its tributaries, and the elimination of CSO related bacterial contamination in that part of the lake classified as "B" (approximately the northern two-thirds of the lake for which the State determined that swimming should be the designated "best use"). It is expected that the proposed program will meet the criteria for compliance established by the State and EPA. The cost of the proposed CSO program is approximately \$144 million. However, if the program does not meet the required objectives, or if the State does not approve the Harbor Brook interim project on a permanent basis, additional construction may be required.

## **OXYGENATION PROJECT**

The Agreement also makes provision for a large-scale demonstration project to test the feasibility of technology to artificially oxygenate the lower waters of the lake. The possible need for artificial oxygenation of the Lake's lower waters is based on water quality model projections which suggest that reduced oxygen in the lower waters of the lake could continue to be a problem for some time. The County will fund this demonstration and, if artificial oxygenation is deemed feasible, the State and EPA will determine the entity or entities which would be required to implement the program as a long-term measure.

## **PROJECT MONITOR**

The settlement also provides for a County funded Lake Monitor, who will be employed under the direction and control of the DEC. The Monitor's role will be to provide DEC oversight and to serve as an intermediary between the County and the DEC. The Monitor is expected to play a critical role in facilitating a smooth working relationship between the parties and in preventing or expediting the resolution of potential problems.

## **PENALTIES AND OTHER PAYMENTS**

The 1989 Consent Judgment included a provision for a monetary penalty of \$875,000 if the County failed to comply with the requirements of the Consent Judgment. The full \$875,000 would have gone directly to the State Treasury. DEC determined that the County did not submit an acceptable MCP on January 11, 1996 as required. The penalty paid to New York State has been reduced to \$50,000.

The County will also provide \$387,500 (administered by the Central New York Regional Planning and Development Board) to be used for the implementation of an Environmental Benefit Project (EBP). The EBP will consist of non-point source projects (eg. agricultural runoff) and management strategies intended to promote nutrient and other management practices to protect Onondaga Lake and its tributaries from non-point pollution.

Further, the County will be required to pay stipulated penalties in the future if it fails to comply with any of the requirements in the proposed Agreement. Penalties will vary depending upon the nature of the violation and its duration, and whether the violation involves a Major or a Minor milestone project. Stipulated penalties that occur as a result of the County's failure to comply with a Minor milestone date will be paid into an escrow account established by the County. If the County complies with the next related Major milestone date, the funds will be returned to the County along with any accrued interest. Further, the Agreement includes a provision to reduce penalties for effluent violations if the County has complied with the effluent limit for a period of twelve months.

It should be noted that the Agreement recognizes that construction associated with the plan will result in interruptions to the treatment process at Metro and exceedences of the permitted effluent limits. Modified interim effluent limits will be established for these periods.

## **ATLANTIC STATES LEGAL FOUNDATION (ASLF) - FEES AND FUTURE ROLE**

The County will pay ASLF allowable costs that have been incurred by ASLF in prosecuting the action they brought against the County and in reaching agreement on this Amended Consent Judgment. This amount will not exceed two hundred thousand dollars (\$200,000) and will be paid only after review of documentation of costs incurred.

The County will also pay ASLF \$350,000 in a lump sum toward the costs and fees that ASLF will incur in fulfilling its future role over the next fifteen years, as set forth in the Agreement. ASLF is required to file with the Court an annual accounting of its use of these funds and to return any unused sums at the close of the Agreement. ASLF's primary role in the future will be to monitor progress and to review and comment on reports and data required by the agreement.

## **OTHER IMPORTANT PROVISIONS**

The Agreement includes a number of other important provisions, including

- A provision reserving the rights of all parties, including the County, to petition the Court for relief from the Judgment
- A provision reserving to the County the right to seek contribution credit in the related Allied Action for expenses incurred pursuant to the proposed Agreement
- A provision permitting the use of alternative technologies approved by the State if such technologies could accomplish the goals of the settlement in a less costly manner
- A provision for dispute resolution.

## **FINANCIAL PROJECTIONS**

The improvements undertaken as a part of the Agreement are expected to cost \$380 million (in today's dollars) and will be undertaken over a period of fifteen years. In the event that future compliance determinations require the construction of additional filtering for phosphorous or a pipe to the Seneca River commencing in the year 2010, the cost of the project would be expected to increase by \$65 million.

Construction costs will be supported by direct aid from New York State and the federal government, low interest subsidized financing from the New York State Economic Facilities Corporation, and user charges assessed to owners of property located within the Consolidated Sanitary District. The County estimates direct state and federal aid totaling approximately \$260 million over the fifteen year construction schedule, including \$75 million in direct aid earmarked for the Onondaga Lake project in the recently approved State Environmental Bond and \$25 million in federal aid already appropriated for projects included in the Lake plan. Based on a projection model which assumes 3% average annual inflation and the aid levels discussed above, it is estimated that the Lake project will add \$59 to the

unit charge after five years. By the tenth year, the unit charge is expected to increase by a total of \$133. And after twenty years, it is estimated that the unit charge will have increased by a total of \$160 as the result of the Lake project.

## **CONCLUSION**

This summary was prepared to provide an overview of the proposed Settlement Agreement. It is by no means exhaustive in scope or analysis. For a more detailed explanation of the provisions summarized above, please refer to the actual Agreement or present your questions to those involved in negotiating and drafting (County Executive's Office, Office of the Environment, Drainage and Sanitation, Finance Office and the Law Department) the proposed Agreement.

Dated: August 28, 1997

12/00

11-2  
30  
Solon, L

Appendix A

State Environmental Quality Review  
FULL ENVIRONMENTAL ASSESSMENT FORM

**Purpose:** The full EAF is designed to help applicants and agencies determine, in an orderly manner, whether a project or action may be significant. The question of whether an action may be significant is not always easy to answer. Frequently, there are aspects of a project that are subjective or unmeasurable. It is also understood that those who determine significance may have little or no formal knowledge of the environment or may be technically expert in environmental analysis. In addition, many who have knowledge in one particular area may not be aware of the broader concerns affecting the question of significance.

The full EAF is intended to provide a method whereby applicants and agencies can be assured that the determination process has been orderly, comprehensive in nature, yet flexible to allow introduction of information to fit a project or action.

**Full EAF Components:** The full EAF is comprised of three parts:

- Part 1:** Provides objective data and information about a given project and its site. By identifying basic project data, it assists a reviewer in the analysis that takes place in Parts 2 and 3.
- Part 2:** Focuses on identifying the range of possible impacts that may occur from a project or action. It provides guidance as to whether an impact is likely to be considered small to moderate or whether it is a potentially-large impact. The form also identifies whether an impact can be mitigated or reduced.
- Part 3:** If any impact in Part 2 is identified as potentially-large, then Part 3 is used to evaluate whether or not the impact is actually important.

**DETERMINATION OF SIGNIFICANCE - Type 1 and Unlisted Actions**

**Identifying the Portions of EAF completed for this project:** ☒Part 1 ☒Part 2 ☒Part 3

Upon review of the information recorded on this EAF (Parts 1 and 2 and 3 if appropriate), and any other supporting information, and considering both the magnitude and importance of each impact, it is reasonably determined by the lead agency that:

- ☐ A. The project will not result in any large and important impact(s) and, therefore, is one which will not have a significant impact on the environment, therefore a **negative declaration** will be prepared.
- ☐ B. Although the project could have a significant effect on the environment, there will not be a significant effect for this Unlisted Action because the mitigation measures described in PART 3 have been required, therefore a **CONDITIONED negative declaration** will be prepared.\*
- ☐ C. The project may result in one or more large and important impacts that may have a significant impact on the environment, therefore a **positive declaration** will be prepared.
- \* A Conditioned Negative Declaration is only valid for Unlisted Actions

**Metro Stage III Ammonia and Stage II Phosphorus Removal Project**

Name of Action

**Onondaga County**

Name of Lead Agency

**Nicholas J. Pirro**

Print or Type Name of Responsible Officer in Lead Agency

**County Executive**

Title of Responsible Officer

Signature of Responsible Officer in Lead Agency

Signature of Preparer (if different from responsible officer)

**November 16, 2000**

Date



## PART 1 - PROJECT INFORMATION

Prepared by Project Sponsor

**NOTICE:** This document is designed to assist in determining whether the action proposed may have a significant effect on the environment. Please complete the entire form, Parts A through E. Answers to these questions will be considered as part of the application for approval and may be subject to further verification and public review. Provide any additional information you believe will be needed to complete Parts 2 and 3.

It is expected that completion of the full EAF will be dependent on information currently available and will not involve new studies, research or investigation. If information requiring such additional work is unavailable, so indicate and specify each instance.

<b>Name of Action</b> <b>Metro Stage III Ammonia and Stage II Phosphorus Removal Project</b>		
<b>Location of Action (include Street Address, Municipality and County)</b> <b>Portions of the Metropolitan Syracuse Wastewater Treatment Plant and adjacent Niagara Mohawk parcel, Hiawatha Boulevard, Syracuse, New York (See Figure 1)</b>		
<b>Name of Applicant/Sponsor</b> Onondaga County <b>Onondaga Lake Improvement Project</b> <b>Onondaga County Department of Drainage and Sanitation</b>		<b>Business Telephone</b> <b>(315) 435-2260</b>
<b>Address</b> <b>650 Hiawatha Boulevard West</b>		
<b>City/PO</b> <b>Syracuse</b>	<b>State</b> <b>New York</b>	<b>Zip Code</b> <b>13204-1194</b>
<b>Name of Owner (if different)</b> <b>Same as above.</b>		<b>Business Telephone</b>
<b>Address</b>	<b>State</b>	<b>Zip Code</b>
<b>City/PO</b>	<b>State</b>	<b>Zip Code</b>
<b>Description of Action:</b> <b>To satisfy conditions of the January 20, 1998 Amended Consent Judgment (ACJ) issued by the United States District Court for the Northern District of New York, the following actions are proposed:</b> <ul style="list-style-type: none"><li>• <b>Construction and operation of Biological Aerated Filter (BAF) technology to reduce ammonia concentrations in Metro effluent.</b></li><li>• <b>Construction and operation of High-Rate Flocculated Settling (HRFS) technology to reduce phosphorus concentrations in Metro effluent.</b></li></ul> <b>In addition, to satisfy requirements of State Pollutant Discharge Elimination System (SPDES) permit modifications that limit chlorine residual levels in Metro effluent to 0.1 mg/l, the County proposes to replace the existing sodium hypochlorite-based effluent disinfection system for Outfall 001 with:</b>		

- Construction and operation of Ultraviolet (UV) disinfection facilities to provide for secondary/tertiary disinfection.

Ancillary components of the project include:

- Construction and operation of a secondary effluent pump station to convey a peak flow of 126.3 million gallons per day (mgd) of secondary effluent to the required elevation for gravity flow through the BAFs, HRFS, and possible future tertiary effluent filters.
- Modifications to existing Metro Outfall 002 to provide for dechlorination of effluent flows.
- Construction and operation of an effluent monitoring and sampling station to provide for the collection of samples required for SPDES permit monitoring and reporting, as well as for overall process control.

To facilitate implementation of the proposed project upgrades, the following additional actions are proposed:

- Acquisition of approximately 3.2 acres of land (former Manufactured Gas Plant, MGP) owned by Niagara Mohawk Power Corporation (Niagara Mohawk) and located contiguous to the existing Metro site.
- Remediation, as necessary, of portions of the former MGP site located within the limits of construction.
- Demolition of all existing structures on the Niagara Mohawk property.

**Please Complete Each Question – Indicate N.A. if not applicable**

## A. Site Description

Physical setting of overall project, both developed and undeveloped areas.

1. Present land use: ☐ Urban ☒ Industrial ☐ Commercial ☐ Residential (suburban)  
☐ Rural (non-farm) ☐ Forest ☐ Agriculture ☐ Other \_\_\_\_\_

2. Total acreage of project area: 8± acres.

### APPROXIMATE ACREAGE

Meadow or Brushland (Non-agricultural)

### PRESENTLY

### AFTER COMPLETION

Forested

Agricultural (Includes orchards, cropland, pasture, etc.)

Wetland (Freshwater or tidal as per Articles 24, 25 of ECL)

Water Surface Area

Unvegetated (Rock, earth or fill)

Roads, buildings and other paved surfaces (road crossings)

Other (Indicate type) \_\_\_\_\_

0 acres

0 acres

0 acres

0 acres

0 acres

0 acres

0 acres

0 acres

0 acres

0 acres

0 acres

0 acres

8 acres

8 acres

0 acres

0 acres

3. What is predominant soil type(s) on project site? Urban Land (Ub)

- a. Soil drainage: ☒ Well drained 100 % of site ☐ Moderately well drained \_\_\_\_\_ % of site  
☐ Poorly drained \_\_\_\_\_ % of site

- b. If any agricultural land is involved, how many acres of soil are classified within soil group 1 through 4 of the NYS Land Classification System? N.A. acres. (See 1 NYCRR 370).

4. Are there bedrock outcroppings on project site? ☐ Yes ☒ No

- a. What is depth to bedrock? 600± (in feet)

5. Approximate percentage of proposed project site with slopes: ☒ 0-10% 100 % ☐ 0-15% \_\_\_\_\_ %  
☐ 15% or greater \_\_\_\_\_ %

6. Is project substantially contiguous to, or contain a building, site, or district, listed on the State or the National Registers of Historic Places? ☐ Yes ☒ No

7. Is project substantially contiguous to a site listed on the Register of National Natural Landmarks? ☐ Yes ☒ No

8. What is the depth of the water table? 5 to 10 (in feet)

9. Is site located over a primary, principal, or sole source aquifer? ☐ Yes ☒ No

10. Do hunting, fishing or shell fishing opportunities presently exist in the project area? ☐ Yes ☒ No

Does project site contain any species of plant or animal life that is identified as threatened or endangered?

- ☐ Yes ☒ No According to US Fish & Wildlife Service; and NYSDEC Natural Heritage Program  
Identify each species \_\_\_\_\_

12. Are there any unique or unusual land forms on the project site? (i.e., cliffs, dunes, other geological formations)  
☐ Yes ☒ No Describe \_\_\_\_\_

13. Is the project site presently used by the community or neighborhood as an open space or recreation area?  
☐ Yes ☒ No If yes, explain The site is located adjacent to Onondaga Lake, a community resource. The project will improve lake water quality (e.g., reduced discharges of ammonia and phosphorus resulting in reduced nutrient loading, improved lake levels of dissolved oxygen, improved water clarity, and improved fish habitat) and meet 3 ACJ milestones ahead of schedule.



14. Does the present site include scenic views known to be important to the community?  
☐ Yes ☒ No
15. Streams within or contiguous to project area: Barge Canal  
a. Name of Stream and name of River to which it is tributary: Onondaga Lake
16. Lakes, ponds, wetland areas within or contiguous to project area: N.A.  
a. Name \_\_\_\_\_ b. Size (in acres) \_\_\_\_\_
17. Is the site served by existing public utilities? ☒ Yes ☐ No  
a) If Yes, does sufficient capacity exist to allow connection? ☒ Yes ☐ No  
b) If Yes, will improvements be necessary to allow connection? ☐ Yes ☒ No
18. Is the site located in an agricultural district certified pursuant to Agriculture and Markets Law, Article 25-AA, Section 303 and 304? ☐ Yes ☒ No
19. Is the site located in or substantially contiguous to a Critical Environmental Area designated pursuant to Article 8 of the ECL, and 6 NYCRR 617? ☐ Yes ☒ No
20. Has the site ever been used for the disposal of solid or hazardous wastes? ☒ Yes ☐ No  
Niagara Mohawk's Hiawatha Boulevard site is one of 21 former Manufactured Gas Plants (MGP) included in an Order on Consent that Niagara Mohawk entered into with the New York State Department of Environmental Conservation (NYSDEC) to investigate and remediate. Analysis of samples have indicted that chemical constituents detected in soil consisted of polynuclear aromatic hydrocarbons (PAHs); benzene, toluene, ethylbenzene, and xylene (BTEX); cyanide and certain metals. BTEX, PAHs, metals and cyanide were detected in ground water. An Interim Remedial Measures (IRM) Work Plan has been developed by Niagara Mohawk and submitted to the NYSDEC. The IRM Work Plan includes measures for the excavation, transportation, treatment and disposal of MGP-impacted soil to be performed concurrently with the construction of the Metro Stage III Ammonia and Stage II Phosphorus Removal Project.

## B. Project Description

physical dimensions and scale of project (fill in dimensions as appropriate):

a. Total contiguous acreage owned or controlled by project sponsor: 48± acres (Metro STP)

3.2 acres are currently owned by Niagara Mohawk, but will be transferred to the County as part of this project.

b. Project acreage to be developed: 8 acres initially; 8 acres ultimately.

c. Project acreage to remain undeveloped: 0 acres.

d. Length of project, in miles (if appropriate): N.A. miles (if appropriate)

e. If the project is an expansion, indicate percent of expansion proposed:      %

Proposed improvements will increase Metro's treatment capacity from 120 mgd to 126.3 mgd.

f. Number of off-street parking spaces: 0 existing;      proposed.

The proposed project site plan provides 60 to 70 parking spaces for vehicles to replace existing Sewer Maintenance Building parking (50 spaces) and to service the needs of the BAF/HRFS operations (10 to 20 spaces).

g. Maximum vehicular trips generated per hour 10 (upon completion of project)?

h. If residential: Number and type of housing units: N.A.

	One Family	Two Family	Multiple Family	Condominium
Initially:	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
Ultimately:	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>

Dimensions (in feet) of largest proposed structure 30 to 37 feet height; 150 feet width; 400 feet length.

j. Linear feet of frontage along a public thoroughfare project will occupy is? 667 ft.

2. How much natural material (i.e., rock, earth, etc.) will be removed from the site? 12,000 tons/ cubic yards  
Based on the layout of proposed facilities, it is estimated that approximately 12,000 cubic yards (cy) of spoil material will require appropriate removal as part of Niagara Mohawk's interim remedial measures (IRM) and/or foundation/pipeline construction (CDM 2000).

3. Will disturbed areas be reclaimed? ☒ Yes ☐ No

a. If yes, for what intended purpose is the site being reclaimed?

Site restoration efforts consistent with NYSDEC-Niagara Mohawk Consent Order and IRM Work Plan.

b. Will topsoil be stockpiled for reclamation? ☐ Yes ☒ No

c. Will upper subsoil be stockpiled for reclamation? ☐ Yes ☒ No

Soils not impacted by former MGP activities will be utilized on-site to the extent practicable.

4. How many acres of vegetation (trees, shrubs, ground covers) will be removed from this site? 0 acres.

The area to be developed is currently occupied by Niagara Mohawk's Maintenance Center and the parking lot for Metro's Sewer Maintenance Building.

5. Will any mature forest (over 100 years old) or other locally-important vegetation be removed by this project?

☐ Yes ☒ No

6. If single phase project: Anticipated period of construction 30 months, (including demolition).

Construction of the Metro Stage III Ammonia and Stage II Phosphorus Removal facilities is scheduled to commence in Spring 2001 and extend over a 2-year timeframe to meet the construction completion milestone of November 1, 2003. Based on the County's implementation schedule, Stage III ammonia limits will be met by 11/01/03, 8 years sooner than required by the ACJ. Construction of the Stage II phosphorus removal project is also scheduled for completion by 11/01/03 (2 years ahead of the ACJ). The County proposes to report the results of the advanced (Stage I) phosphorus pilot study by 12/31/00, 7 years sooner than required by the ACJ.

7. If multi-phased: N.A.

a. Total number of phases anticipated:      (number)

b. Anticipated date of commencement phase 1      month      year, (including demolition).

c. Approximate completion date of final phase      month      year.

8. d. Is phase 1 functionally dependent on subsequent phases? ☐ Yes ☒ No  
Will blasting occur during construction? ☐ Yes ☒ No
9. Number of jobs generated during construction 500; after project is complete 5-10 (dependent upon final design).
10. Number of jobs eliminated by this project. None
11. Will project require relocation of any projects or facilities? ☐ Yes ☒ No If yes, explain  
No community facilities or businesses are being relocated as a direct result of this project. Niagara Mohawk had previously relocated service center-related operations to other existing Niagara Mohawk facilities. The sewer maintenance and heavy vehicle maintenance staff were to be relocated to the County's Ley Creek Pump Station.
12. Is surface liquid waste disposal involved? ☒ Yes ☐ No  
Proposed Metro modifications will provide for additional treatment of wastewater at the end of the current process. Consequently, proposed modifications are intended to further treat wastewater at a point where they have substantially completed the treatment process.  
a. If yes, indicate type of waste (sewage, industrial, etc.) and amount  
b. Name of water body into which effluent will be discharged \_\_\_\_\_
13. Is subsurface liquid waste disposal involved? ☐ Yes ☒ No Type \_\_\_\_\_
14. Will surface area of an existing water body increase or decrease by proposal? ☐ Yes ☒ No  
Explain:
15. Is project or any portion of project located in a 100 year flood plain? ☒ Yes ☐ No  
A portion of the Metro site is located within the 100-year floodplain for Onondaga Creek (FEMA 1992).
16. Will the project generate solid waste? ☒ Yes ☐ No  
Process waste sludge will be generated due to the solids removing capabilities of the BAF and HRFS systems. Solids will be periodically removed via backwash operations and handled with other wastewater residuals generated during treatment operations.  
a. If yes, what is the amount per month? 390 tons  
b. If yes, will an existing solid waste facility be used? ☒ Yes ☐ No  
c. If yes, give name: Metro Solids Handling Facilities; location Metro STP  
d. Will any wastes not go into a sewage disposal system or into a sanitary landfill? ☒ Yes ☐ No  
e. If yes, explain:  
Soils and ground water identified by Niagara Mohawk as being impacted by past activities may require special handling. Impacted soils and ground water encountered during construction activities will be managed off-site in accordance with applicable regulations, as well as the Niagara Mohawk's IRM Work Plan.
17. Will the project involve the disposal of solid waste? ☐ Yes ☒ No  
a. If yes, what is the anticipated rate of disposal? \_\_\_\_\_ tons/month  
b. If yes, what is the anticipated site life? \_\_\_\_\_ years.
18. Will project use herbicides or pesticides? ☐ Yes ☒ No
19. Will project routinely produce odors (more than one hour per day)? ☐ Yes ☒ No  
Proposed operations are not odor-producing activities. Based on observations made during visits to existing similar facilities utilizing the proposed technologies, as well as discussions with operations staff, no significant odor-producing impacts were identified. The proposed operations are part of a sequence of treatment processes. The new processes are located at a point in that sequence where significant treatment (including removal of odor producing materials) of the wastewater has already occurred. Additionally, the projects will provide for foundation and structural design to accommodate addition of roofs and/or covers of the process tanks for general operations purposes, if deemed appropriate based on operating experience.
20. Will project produce operating noise exceeding the local ambient noise levels? ☐ Yes ☒ No

Noise will be generated during construction activities. Construction-related noise will be short-term (i.e., limited to the construction phase). The primary sources of noise at the site will be construction operations and on-site traffic – consistent with the types of noise occurring under existing conditions. Off-site noise will be generated by project-related traffic accessing and egressing the site and traveling local roads.

The following best management practices (BMPs) will be employed during the construction phase of the project:

- Engine powered equipment will be properly muffled and maintained.  
Equipment will be turned off when not in use.
- Scheduling of construction activities will consider potential noise disturbances of area properties.

Upon completion of construction and based on existing treatment operations and visits to other such facilities, it is not anticipated that noise generated on-site during operation of the proposed facilities will impact the surrounding area. Major mechanical equipment will be housed inside structures. Ancillary external operations will be consistent with existing noise generating operations at the Metro site.

21. Will project result in an increase in energy use? ☒ Yes ☐ No

If yes, indicate type(s)

The proposed project will use electricity and natural gas. Power consumption rates are expected to be within the existing capacities of Niagara Mohawk's existing infrastructure. Project design and operating standards will maximize energy conservation to minimize energy use and air quality impacts.

22. If water supply is from wells, indicate pumping capacity: N.A. gallons/minute.

23. Total anticipated water usage per day: N.A. gallons/day.

24. Does project involve Local, State or Federal funding? ☒ Yes ☐ No

If yes, explain: The County has applied for federal funding through the State and Tribal Assistance Grant (STAG) program, and State funding through the Clean Water State Revolving Fund.

Approvals Required:			Type	Submittal Date
City, Town, Village Board	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No		
City, Town, Village Planning Board	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No		
City, Town Zoning Board	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No		
City, County Health Department	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No		
Other Local Agencies	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No		
Other Regional Agencies	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No		
State Agencies	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	See Table 1	
Federal Agencies	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	See Table 1	

**Table 1 Potential permits, consistency reviews and approvals.**

Permitting Agency	Applicable Statute and/or Regulations	Activity Covered
USEPA	Federal grants	Reimbursable work items.
NYSDEC	ACJ	Review and approval of design work.
NYSDEC	Clean Air/Clean Water Bond Act and/or Environmental Protection Fund	Reimbursable work items.
NYSDEC	SPDES (Article 17, Title 7, 8 & Article 70 of the ECL)	General permit (GP-98-06) for storm water discharges from construction activities. Preparation of storm water pollution prevention plan.
NYSDEC	SPDES	Modification of existing Onondaga Lake discharge permit.
NYSEFC	Revolving Loan Fund	Reimbursable work items.
NYSOPRHP	Federal & State Historic Preservation Laws (9 NYCRR 428) (36 CFR 800)	Activities affecting historic, architectural, archaeological, or cultural resources.

**Notes:**

NYSDEC - New York State Department of Environmental Conservation

NYSEFC - New York Environmental Facilities Corporation

NYSOPRHP - New York State Office of Parks, Recreation & Historic Preservation

ROW - Right-of-way

SPDES - State Pollutant Discharge Elimination System

USEPA - United States Environmental Protection Agency

Source: Environmental Engineering Associates, LLP

### C. Zoning and Planning Information


Does proposed action involve a planning or zoning decision? ☐ Yes ☒ No

If yes, indicate decision required:

☐ zoning amendment ☐ zoning variance ☐ special use permit ☐ subdivision ☐ site plan  
☐ new/revision of master plan ☐ resource management plan ☐ other \_\_\_\_\_

2. What is the zoning classification(s) of the site? Industrial
3. What is the maximum potential development of the site if developed as permitted by the present zoning?  
N.A.
4. What is the proposed zoning of the site? N.A.
5. What is the maximum potential development of the site if developed as permitted by the proposed zoning?  
N.A.
6. Is the proposed action consistent with the recommended uses in adopted local land use plans? ☒ Yes ☐ No  
The County supports efforts to revitalize the lakefront area of the City of Syracuse and is cognizant of its actions and potential impacts on such development (build-out in the Lakefront Development District will result in the generation of approximately 1 mgd of additional dry weather flow to Metro). Consequently, the County continues to work with local planners to develop programs consistent with and supportive of lake front development plans.
7. What are the predominant land use(s) and zoning classifications within a 1/4 mile radius of proposed action?  
The Metro facility is located in a commercial/industrial area of Syracuse. In addition to the Niagara Mohawk property, adjacent uses include a scrap metal salvage yard, a CSX railroad line, Barge Canal terminal, gas station, contractor yards, manufacturing facilities, and the Carousel Mall (retail shopping). No residential uses are located within an approximate one-half mile radius of the facility.
8. Is the proposed action compatible with adjoining/ surrounding land uses within a 1/4 mile? ☒ Yes ☐ No
9. If the proposed action is the subdivision of land, how many lots are proposed? N.A.  
a. What is the minimum lot size proposed? \_\_\_\_\_
10. Will proposed action require any authorization(s) for the formation of sewer or water districts? ☐ Yes ☒ No
11. Will the proposed action create a demand for any community provided services (recreation, education, police, fire protection)? ☐ Yes ☒ No  
a. If yes, is existing capacity sufficient to handle projected demand? ☐ Yes ☐ No
12. Will the proposed action result in the generation of traffic significantly above present levels? ☐ Yes ☒ No  
Proposed operations will not significantly affect existing staffing requirements, or vehicles accessing and egressing the Metro facility. Based on minimal staffing projections, approximately 10± additional trips are estimated for the weekday morning and evening peak hours. Based on this anticipated minimal increase in trips, as well as the existing capacity of Hiawatha Boulevard and Pulaski Street, the project will not result in significant trips that would lead to social impacts of increased traffic congestion or substantial changes to pedestrian trip generators and destinations. Consequently, no modifications to the existing entrance or signalized intersection are warranted. Sidewalks will be added and improved for the Metro frontage portion of Hiawatha Boulevard West to assist pedestrian traffic in the area. Also, since the plans for the expansion of the Carousel Center include closing Hiawatha Boulevard to through traffic, it could be expected that, if the expansion occurs, that traffic on Hiawatha Boulevard West will decrease over current conditions.  
a. If yes, is the existing road network adequate to handle the additional traffic? ☒ Yes ☐ No  
Two options exist for access to the BAF and HRFS operations after construction: 1.) from the south and north side utilizing the existing Metro entrance from Hiawatha Boulevard and 2.) from a new entrance





located at the existing three-way intersection of Hiawatha Boulevard and Van Rensselaer Street.<sup>1</sup> The County will work with the City of Syracuse Department of Public Works to determine whether construction of a new permanent entrance off Hiawatha Boulevard near Van Rensselaer or use of the existing main entrance at the intersection of Hiawatha Boulevard and Pulaski Street, or possible use of both entrances is preferred. Since the existing entrance and the proposed new entrance directly access Hiawatha Boulevard, traffic impacts should not differ regardless of the outcome of discussions with the City. At a minimum, if a new entrance is constructed, a new traffic signal would need to be installed at that location controlling traffic on Hiawatha Boulevard, Van Rensselaer Street and the Metro entrance.

---

<sup>1</sup> A temporary construction entrance will be utilized to facilitate site access and egress during the construction phase. This entrance, located at the existing driveway to the Niagara Mohawk site (east of the existing Metro entrance), may be completed as a secondary permanent entrance to the Metro site.

**D. Informational Details**

Attach any additional information as may be needed to clarify your project. If there are or may be any adverse impacts associated with your proposal, please discuss such impacts and the measures which you propose to mitigate or avoid them.

**E. Verification**

I certify that the information provided above is true to the best of my knowledge.

Applicant/Sponsor Name: Onondaga County Date: \_\_\_\_\_

Signature: \_\_\_\_\_ Title Director, Lake Improvement Project

If the action is in the Coastal Area, and you are a state agency, complete the Coastal Assessment Form before proceeding with this assessment.

N.A.



## Part 2 - PROJECT IMPACTS AND THEIR MAGNITUDE

### Responsibility of Lead Agency

#### General Information (Read Carefully)

- In completing the form the reviewer should be guided by the question: Have my responses and determinations been reasonable? The review is not expected to be an expert environmental analyst.
- Identifying that an impact will be potentially large (column 2) does not mean that it is also necessarily significant. Any large impact must be evaluated in PART 3 to determine significance identifying an impact in column 2 simply asks that it be looked at further.
- The Examples provided are to assist the reviewer by showing types of impacts and wherever possible the threshold or magnitude that would trigger a response in column 2. The examples are generally applicable throughout the State and for most situations. But, for any specific project or site other examples and/or lower thresholds may be appropriate for a Potential Large Impact response, thus requiring evaluation in Part 3.
- The impacts of each project on each site, in each locality, will vary. Therefore, the examples are illustrative and have been offered as guidance. They do not constitute an exhaustive list of impacts and thresholds to answer each question.
- The number of examples per question does not indicate the importance of each question.
- In identifying impacts, consider long term, short term and cumulative effects.

#### Instructions (Read Carefully)

- Answer each of the 19 questions in PART 2. Answer Yes if there will be any impact.
- Maybe answers should be considered as Yes answers.
- If answering Yes to a question then check the appropriate box (column 1 or 2) to indicate the potential size of the impact. If impact threshold equals or exceeds any example provided, check column 2. If impact will occur but the threshold is lower than example, check column 1.
- If reviewer has doubt about size of the impact then consider the impact as potentially large and proceed to PART 3. If a potentially large impact checked in column 2 can be mitigated by change(s) in the project to a small to moderate impact, also check the Yes box in column 3. A No response indicates that such a reduction is not possible. This must be explained in Part 3.

#### IMPACT ON LAND

Will the Proposed Action result in a physical change to the project site?

☐ NO    ☒ YES

Examples that would apply to column 2.

Any construction on slopes of 15% or greater (15 foot rise per 100 foot of length), or where the general slopes in the project area exceed 10%.

Construction on land where the depth to the water table is less than 3 feet.

Construction of paved parking area for 1,000 or more vehicles

Construction on land where bedrock is exposed or generally within 3 feet of existing ground surface

Construction that will continue for more than 1 year or involve more than one phase or stage

Excavation for mining purposes that would remove more than 1,000 tons of natural material (i.e. rock or soil) per year

Construction or expansion of a sanitary landfill

Construction in a designated floodway

Other Impacts Contaminated site will be remediated, landscaped.

- Will there be an effect to any unique or unusual landforms found on the site? (i.e. cliffs, dunes, geological formations, etc.) ☒ NO    ☐ YES

Specific land forms: \_\_\_\_\_

1 Small to Moderate Impact	2 Potential Large Impact	3 Can Impact Be Mitigated By Project Change
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No

3. Will Proposed Action affect any water body designated as protected? (Under Articles 15, 24, 25 of the Environmental Conservation Law, ECL)

**Examples that would apply to column 2.**

☐ ☐ ☐ Yes ☐ No

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No
--------------------------	--------------------------	------------------------------	-----------------------------

☐      ☐      ☐ Yes    ☐ No☐ NO    ☐ YES

A 10% increase or decrease in the surface area of any body of water or more than a 10 acre increase or decrease.

☐ ☐ ☐ Yes ☐ No☐ ☐ ☐ Yes ☐ No☐ ☐ ☐ Yes ☐ No

☐ NO    ☒ YES

☐ Yes   ☒ No☐ ☐ ☐ Yes ☐ No☐ ☐ ☐ Yes ☐ No

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No
--------------------------	--------------------------	------------------------------	-----------------------------

☐ ☐ ☐ Yes ☐ No☐ ☐ ☐ Yes ☐ No☐ ☐ ☐ Yes ☐ No☐ | ☐ | ☐ Yes ☐ No☐ ☐ ☐ Yes ☐ No☐ ☐ ☐ Yes ☐ No☐ ☐ ☐ Yes ☐ No

Other impacts Project will have beneficial impact on Lake water quality

6. Will Proposed Action alter drainage flow or patters, or surface water runoff?

☒ NO ☐ YES

Examples that would apply to column 2

- Proposed Action would change flood water flows

Proposed Action may cause substantial erosion

Proposed Action is incompatible with existing drainage patterns

Proposed Action will allow development in a designated floodway

Other Impacts \_\_\_\_\_

#### IMPACT ON AIR

Will Proposed Action affect air quality?

☒ NO ☐ YES

Examples that would apply to column 2

Proposed Action will induce 1,000 or more vehicle trips in any given hour

Proposed Action will result in the incineration of more than 1 ton of refuse per hour.

Emission rate of total contaminants will exceed 5 lbs. per hour or a heat source producing more than 10 million BTU's per hour.

Proposed Action will allow an increase in the amount of land committed to industrial use

Proposed Action will allow an increase in the density of industrial development within existing industrial areas

#### IMPACT ON PLANTS AND ANIMALS

8. Will Proposed Action affect any threatened or endangered species?

☒ NO ☐ YES

Examples that would apply to column 2.

Reduction of one or more species listed on the New York or Federal list, using the site, over or near site or found on the site.

Removal of any portion of a critical or significant wildlife habitat.

Application of pesticide or herbicide more than twice a year, other than for agricultural purposes

9. Will Proposed Action substantially affect non-threatened or non-endangered species?

☐ NO ☒ YES

Examples that would apply to column 2.

- Proposed Action would substantially interfere with any resident or migratory fish, shellfish or wildlife species

Proposed Action requires the removal of more than 10 acres of mature forest (over 100 years of age) or other locally important vegetation.

Other Impacts Project will have beneficial impact on fish and other aquatic animals in Onondaga Lake because of the reduction in ammonia and phosphorus effluent concentrations.

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

## IMPACT ON AGRICULTURAL LAND RESOURCES

10. Will the Proposed Action affect agricultural land resources? ☒ NO ☐ YES

**Examples that would apply to column 2**

- The Proposed Action would sever, cross or limit access to agricultural land (includes cropland, hayfields, pasture, vineyard, orchard, etc.)

**Construction activity would excavate or compact the soil profile of agricultural land**

The Proposed Action would irreversibly convert more than 10 acres of agricultural land or if located in an Agricultural District more than 2.5 acres of agricultural land

The Proposed Action would disrupt or prevent installation of agricultural land management systems (e.g. subsurface drain lines, outlet ditches, strip cropping), or create a need for such measures (e.g. cause a farm field to drain poorly due to increased runoff)

## Other Impacts

## IMPACT ON AESTHETIC RESOURCES

11. Will Proposed Action affect aesthetic resources? ☒ NO ☐ YES

(If necessary, use the Visual EAF Addendum in Section 617.21, Appendix B)

### Examples that would apply to column 2

**Proposed land uses, or project components obviously different from or in sharp contrast to current surrounding land use patterns, whether man-made or natural**

Proposed land uses, or project components visible to users of aesthetic resources which will eliminate or significantly reduce their enjoyment of the aesthetic qualities of that resource

**Project components that will result in the elimination or significant screening or scenic views known to be important to the area**

### Other Impacts

## IMPACT ON HISTORIC AND ARCHAEOLOGICAL RESOURCES

12. Will Proposed Action impact any site or structure of historic, pre-historic or paleontological importance? ☒ NO ☐ YES

**Examples that would apply to column 2**

**Proposed Action occurring wholly or partially within or substantially contiguous to any facility or site listed on the State or National Register of historic places**

**Any impact to an archaeological site or fossil bed located within the project site**

**Proposed Action will occur in an area designated as sensitive for archaeological sites on the NYS Site Inventory**

### Other Impacts

## IMPACT ON OPEN SPACE AND RECREATION

13. Will Proposed Action affect the quantity or quality of existing or future open spaces or recreational opportunities? ☐ NO ☒ YES

### Examples that would apply to column 2

**The permanent foreclosure of a future recreational opportunity**

**A major reduction or an open space important to the community**



Other Impacts The project will have a beneficial impact on the quality of Onondaga Lake which will enhance the Onondaga Lake park and shoreline.

#### IMPACT ON TRANSPORTATION

14. Will there be an effect to existing transportation systems? ☒ NO ☐ YES  
Examples that would apply to column 2

Alteration of present patterns or movement of people and/or goods

Proposed Action will result in major traffic problems

Other Impacts \_\_\_\_\_

#### IMPACT ON ENERGY

15. Will Proposed Action affect the community's source of fuel or energy supply? ☒ NO ☐ YES  
Examples that would apply to column 2

- Proposed Action will cause a greater than 5% increase in the use of any form of energy in the municipality
- Proposed Action will require the creation of extension of an energy transmission or supply system to serve more than 50 single or two family residences or to serve a major commercial or industrial use.

Other Impacts \_\_\_\_\_

#### NOISE AND ODOR IMPACTS

16. Will there be objectionable odors, noise, or vibration as a result of the Proposed Action? ☒ NO ☐ YES  
Examples that would apply to column 2

Blasting within 1,500 feet of a hospital, school, or other sensitive facility

Odors will occur routinely (more than one hour per day)

Proposed Action will produce operating noise exceeding the local ambient noise levels for noise outside of structures

Proposed Action will remove natural barriers that would act as a noise screen

Other Impacts \_\_\_\_\_

#### IMPACT ON PUBLIC HEALTH

17. Will Proposed Action affect public health and safety? ☒ NO ☐ YES  
Examples that would apply to column 2

Proposed Action may cause a risk of explosion or release of hazardous substances (i.e. oil, pesticides, chemicals, radiation, etc.) in the event of accident or upset conditions, or there may be a chronic low level discharge or emission

Proposed Action may result in the burial of "hazardous wastes" in any form (i.e. toxic, poisonous highly reactive, radioactive, irritating, infectious, etc.)

Storage facilities for one million or more gallons of liquefied natural gas or other flammable liquids

Proposed Action may result in the excavation or other disturbance within 2,000 feet of a site used for the disposal of solid or hazardous waste

Excavation within areas potentially affected by past MGP activities will be conducted in accordance with Niagara Mohawk's IRM Work Plan.

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

Other Impacts \_\_\_\_\_

**IMPACT ON GROWTH AND CHARACTER  
OF COMMUNITY OR NEIGHBORHOOD**

18. Will Proposed Action affect the character of the existing community?

☐ NO ☒ YES

Examples that would apply to column 2

The permanent population of the city, town or village in which the project is located is likely to grow by more than 5%

The municipal budget for capital expenditures or operating services will increase by more than 5% per year as a result of this project

Proposed Action will conflict with officially adopted plans or goals

Proposed Action will cause a change in the density of land use

Proposed Action will replace or eliminate existing facilities, structures or areas of historic importance to the community

Development will create a demand for additional community services (e.g. schools, police and fire, etc.)

Proposed Action will set an important precedent for future projects

Proposed Action will create or eliminate employment

Other Impacts Proposed Action will improve the quality of Metro discharges including reduced ammonia and phosphorus that will result in significant lake water quality and habitat improvements

19. Is there, or is there likely to be, public controversy related to potential adverse environmental impacts?

☒ NO ☐ YES

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

617.21  
Appendix A  
State Environmental Quality Review  
FULL ENVIRONMENTAL ASSESSMENT FORM

**PART 3 - EVALUATION OF THE IMPORTANCE OF IMPACTS**

Pursuant to 6 NYCRR § 617.20 (Appendix A), this document represents Part 3 of the Full Environmental Assessment Form (EAF). For each potentially large impact identified in Column 2 of Part 2 of the EAF (attached), a discussion of the following issues is developed:

- a brief description of the impact;
  - a description of how the impact could be mitigated or reduced to a small to moderate impact by project changes; and
  - a reasonable conclusion as to the importance of the impact.
- 

**Discussion:**

Based on the evaluation presented in Part 2 of the EAF, no significant adverse impacts were identified. This section describes other potential environmental impacts and issues (direct, indirect, cumulative, short- and long-term) resulting from implementation of the project.

**Background.** Onondaga County (the County) prepared an Environmental Information Document (EID) to evaluate potential environmental and socio-economic impacts from proposed upgrades to the County-operated Metropolitan Syracuse Wastewater Treatment Plant (Metro). Information from the EID was relied upon to support the discussion in this section of the EAF.

The project, referred to as the Metro Stage III Ammonia and Stage II Phosphorus Removal Project (the project), has been proposed to satisfy conditions of the January 20, 1998 Amended Consent Judgment (ACJ) issued by the United States District Court for the Northern District of New York. The ACJ provides the basis for the project and requires the County to:

*"...comply with all effluent limitations and monitoring requirements set forth in its SPDES [State Pollutant Discharge Elimination System] permit (Permit Number NY0027081) including renewals, modifications and revisions thereof, and shall not discharge effluent from Metro or the CSOs [Combined Sewer Overflows] which causes or contributes to conditions in violation of water quality standards. Notwithstanding the foregoing, the County shall meet and maintain compliance with the effluent limitations for ammonia and phosphorus, and the requirements applicable to discharges from the CSOs, and shall cease causing or contributing to the violation of the concomitant water quality standards, in accordance with the compliance dates and other requirements set forth below, including the Effluent Compliance Schedule, Metro Construction Compliance Schedule and the CSO Control and Upgrade Compliance Schedule." (ACJ pp. 6-7)*

The ACJ-mandated Effluent Compliance Schedule requires that:

**"EFFLUENT COMPLIANCE SCHEDULE - STAGE I (ACJ p.7)**

5. *Upon the Court's entry of the Amended Consent Judgment, and continuing until May 1, 2004, with respect to effluent discharges from Metro, the County shall not exceed an ammonia*



*effluent limit measured as ammonia ("NH<sub>3</sub>") of 8,700 pounds per day from July 1 through September 30, and 13,100 pounds per day from October 1 through June 30, measured as a 30 day average.*

6. *Upon the Court's entry of the Amended Consent Judgment, and continuing until April 1, 2006 with respect to effluent discharges from Metro, the County shall not exceed a phosphorus effluent limit of 400 pounds per day, measured as a twelve month rolling average.*

#### **EFFLUENT COMPLIANCE SCHEDULE – STAGE II**

7. *Beginning no later than May 1, 2004, the County shall not exceed an ammonia effluent limit measured as ammonia (NH<sub>3</sub>) of 2 milligrams per liter ("mg/l") from June 1 through October 31, and 4 mg/l from November 1 through May 31, measured as a thirty day average.*
8. *Beginning no later than April 1, 2006, the County shall not exceed a phosphorus limit of 0.12 mg/l, measured as a twelve month rolling average.*

#### **COMPLIANCE SCHEDULE – STAGE III (ACJ p.8)**

9. *Beginning no later than December 1, 2012, the County shall.*
  - A. *not exceed an ammonia effluent limit of 1.2 mg/l measured as ammonia ("NH<sub>3</sub>") from June 1 through October 31, and 2.4 mg/l from November 1 through May 31, measures as a thirty day average, and*
  - B. *not exceed a phosphorus effluent limit of 0.02 mg/l measured as a twelve month rolling average, or*
  - C. *in the event that DEC issues revised effluent limits for ammonia and/or phosphorus provided in paragraph 12, then the County shall not exceed those limits instead of limits set forth in subparagraphs A and B above."*

Under provisions of the ACJ, the County is required to conduct a pilot demonstration of biological aerated filters (BAF) technology for the removal of ammonia. Onondaga County initiated the BAF pilot demonstration in 1998 and completed a report that was provided to, and subsequently approved by, the New York State Department of Environmental Conservation (NYSDEC) in 1999. The ACJ also requires pilot demonstration of advanced phosphorus removal technologies (April 1, 2006 to July 1, 2007) which Onondaga County has moved ahead and is currently undertaking. However, since Onondaga County decided to utilize an alternative technology for Stage II phosphorus removal, the County has also undertaken and completed a pilot demonstration of High Rate Flocculated Settling technology (HRFS). The HRFS pilot demonstration proved that the HRFS would meet or exceed the phosphorus removal capabilities of conventional sand filtration designed to meet the ACJ limit for Stage II phosphorus effluent. The ammonia and phosphorus removal demonstration (pilot) projects were undertaken to develop and establish design criteria and performance characteristics for removal of ammonia and phosphorus according to the ACJ's Effluent Compliance Schedule.

The results of that pilot testing, the inherent characteristics of the technologies tested and intended to be utilized by the County, and the ACJ form the basis for the "project." The EID evaluates potential environmental and socio-

### EAF - Part 3

economic impacts that may result from the implementation of the Metro improvement project proposed by the County to meet ACJ-mandated Stage III Ammonia and Stage II Phosphorus effluent limits. The EID evaluation is summarized in this part of the EAF.

**Proposed actions.** The County proposes the following actions:

- Construction and operation of Biological Aerated Filter (BAF) technology to reduce ammonia concentrations in Metro effluent.
- Construction and operation of High-Rate Flocculated Settling (HRFS) technology to reduce phosphorus concentrations in Metro effluent.

In addition, to satisfy requirements of State Pollutant Discharge Elimination System (SPDES) permit modifications that limit chlorine residual levels in Metro effluent to 0.1 mg/l, the County proposes to replace the existing sodium hypochlorite-based effluent disinfection system for Outfall 001 with:

- Construction and operation of Ultraviolet (UV) disinfection facilities to provide for secondary/tertiary disinfection.
- Ancillary components of the project include:
  - Construction and operation of a secondary effluent pump station to convey a peak flow of 126.3 million gallons per day (mgd) of secondary effluent to the required elevation for gravity flow through the BAFs, HRFS, and possible future tertiary effluent filters.
  - Modifications to existing Metro Outfall 002 to provide for dechlorination of effluent flows.
  - Construction and operation of an effluent monitoring and sampling station to provide for the collection of samples required for SPDES permit monitoring and reporting, as well as for overall process control.

To facilitate implementation of the proposed project upgrades, the following additional actions are proposed:

- Acquisition of approximately 3.2 acres of land (former MGP site) owned by Niagara Mohawk Power Corporation (Niagara Mohawk) and located contiguous to the existing Metro site.
- Remediation, as necessary, of portions of the former MGP site located within the limits of construction
- Demolition of all existing structures on the Niagara Mohawk property.

**Objectives.** Implementation of the project will allow the County to meet its water quality objectives under the ACJ.

**Benefits.** Development of the combined project will result in the following benefits:

improves water quality of lake sooner - meeting 3 major ACJ milestones ahead of schedule<sup>1</sup>;

---

<sup>1</sup> Based on the County's implementation schedule, Stage III ammonia limits will be met by 11/01/03, 8 years sooner than required by the ACJ. Construction of the Stage II phosphorus removal project is also scheduled for completion by 11/01/03 (2 years ahead November 16, 2000

### EAF - Part 3

reduces estimated total project costs by approximately \$69 million;

lowers operation and maintenance costs;

keeps Metro operations fully intact until start-up of upgraded treatment (e.g., avoids demolition of tertiary clarifiers<sup>2</sup> and minimizes treatment shutdowns during construction); and

allows use of UV disinfection by improved solids removal, substantially reducing need to store and use chemicals for chlorination and dechlorination processes.

Ultimately, reduced ammonia and phosphorus discharges will result in significant lake water quality and habitat improvements including:

reduced discharge of oxygen-depleting compounds resulting in improved lake levels of dissolved oxygen (DO);

improved water clarity (or transparency);

reduced threat of toxicity to fish resulting in improved fish habitat and propagation; and

reduced nutrient loading resulting in a lower potential for algae blooms and die-offs and subsequent odors.

**Alternatives.** Since the January 1989 Judgment on Consent, the County has been evaluating alternatives to improve the water quality of Onondaga Lake and to meet mandated wastewater discharge limits. A combination of factors has been considered over the years which has directed the development and review of alternatives to comply with the 1989 Judgment on Consent and subsequent requirements. The factors include:

water quality goals and discharge standards;  
available wastewater treatment technologies; and  
geographical considerations (discharge location).

Section 1.2 of the EID provides a historical perspective as to the scientific and engineering studies conducted over time to develop a compliance plan consistent with the above factors. The discussion of alternatives is presented in a progression, based upon these factors and how the project evolved over time to the current proposal. Technologies considered and the geographical applications of feasible technologies are presented, based upon the effluent requirements at a specific point in time. The progression of screening and refining the list of feasible alternatives over the approximately ten-year period is presented, as well as the specific evaluation requirements of the 1998 ACJ.

During the course of alternatives identification, screening and detailed evaluation, the same set of basic evaluation criteria has been utilized. The criteria were established to be consistent with water quality goals, while addressing a myriad of technical, functional and economic factors. Basic evaluation criteria included:

Regulatory compliance (achieve specific effluent limits)  
Reliability  
Flexibility

of the ACJ). The County proposes to report the results of the advanced (Stage III) phosphorus pilot study by 12/31/00, 7 years sooner than required by the ACJ.

<sup>2</sup> The siting of the proposed ammonia and phosphorus removal facilities, originally depicted in the ACJ, included demolition of the six existing tertiary clarifiers and construction on the tertiary clarifier site. Data obtained and observations made during the BAF pilot testing established the need for continued operation of the tertiary clarifiers during high flow periods or other unit processes to removed suspended solids. Currently, solids washed out of the secondary clarifiers are captured by the tertiary clarifiers such that the SPDES limits for effluent total suspended solids is met. Consequently, it is apparent that the tertiary clarifiers should remain in operation during construction and that the proposed facilities should be constructed on the available Niagara Mohawk site.

November 16, 2000

I:\div13\projects\6064\25768\5\_rpts\final\efp3.doc

### EAF - Part 3

Capital and O&M cost-effectiveness  
Constructability  
Operability  
Land Requirements  
Energy Requirements  
Residual/byproducts generated  
Noise, odors and aesthetics  
Public acceptance

These criteria were used to screen the initial list of feasible alternatives and to develop a set of prime alternatives that warranted further, more detailed evaluation. During the process leading up to execution of the ACJ in 1998, additional criteria relative to effluent limits, technologies, pilot programs and schedule were established. In addition, in evaluating alternatives, the capital investment represented by the existing Metro treatment facilities and associated infrastructure (galleries, utilities, etc.) was taken into account. The present day value of this facility is very significant and replacement at another site would be extremely expensive. The alternative evaluation timeline is summarized below.

#### Ammonia and Phosphorus Removal

The January 1989 Judgment on Consent required the County to improve the discharge from Metro to comply with water quality goals for Onondaga Lake. Primarily of concern were the levels of ammonia and phosphorus in the plant's effluent which were released into the lake. The discharge limits at that time were not specifically developed. The County was required to investigate options for ammonia and phosphorus removal in parallel to standards development.

In accordance with the 1989 consent order, Onondaga County performed a study of engineering alternatives for the reduction of pollutant loadings discharges to Onondaga Lake from Metro. The scope of this study ("Work Plan for Onondaga Lake Study Management Alternatives") dated May 1990 was reviewed and approved by NYSDEC as required by the consent order.

Water quality models were being developed for Onondaga Lake under the direction of the Central New York Regional Planning and Development Board (CNYRPDB). The study included investigation of a broad range of generalized pollutant reduction alternatives. These included ammonia removal (nitrification) at Metro, nitrogen removal (denitrification) at Metro, additional phosphorus removal at Metro, and relocation of the Metro outfall.

To comply with the proposed ammonia and phosphorus effluent limits, the County developed a list of feasible technologies based upon current state-of-the-art alternatives available at that time. Reference documents such as the USEPA Nitrogen Removal Manual (1974 draft updated version and 1994 version), wastewater treatment textbooks and technical publications regarding ongoing research and existing facilities were reviewed. Technologies considered ranged from proven conventional applications to innovative concepts that would satisfy effluent criteria. Technologies were presented and evaluated in the May 1990 Work Plan.

Feasible technologies considered both physical/chemical and biological processes for ammonia removal and included:

1. Ammonia stripping (physical/chemical)
2. Conventional single and multi-stage aeration (biological).

Feasible technologies considered for phosphorus removal included:

### EAF - Part 3

- Chemical addition and utilization of existing tertiary tanks
2. Chemical addition and conventional filtration
3. Biological processes.

Based upon water quality modeling and lake-related scientific studies, alternatives to the existing Metro discharge location were also reviewed. These alternatives were considered due to varying assimilative capacities for ammonia and phosphorus in Onondaga Lake and other water bodies. Alternatives included:

- Onondaga Lake existing discharge
2. Onondaga Lake hypolimnetic discharge
3. Seneca River discharge
4. Partial diversion to other County WWTPs (discharging to the Seneca River)
5. Lake Ontario discharge.

A brief description of the above-listed discharge location alternatives is provided in Section 2.7 of the EID.

- Over the course of the evaluations, several alternatives, other than those indicated above, were presented by public and/or private entities. These alternatives were reviewed by the County on a case-by-case basis. The majority of them lacked basic scientific, engineering and/or financial information to warrant further evaluation. These other alternatives included:

- wetlands technologies
2. individual household treatment systems
3. ultraviolet radiation
4. specialized microorganisms
5. discharge pipeline under Onondaga Lake to the Seneca River
6. sidestream treatment
7. sequencing batch reactors followed by back-to-back sand filtration.

The summary report published in July 1991 (revised in January 1992) entitled "Preliminary Sizing and Cost Estimates for Metro Engineering Alternatives" and an accompanying report entitled "Projected Flows and Loadings Metro Engineering Alternatives," published in April 1991 (Revised April 1992) established the alternatives for further evaluation to remove ammonia, nitrogen and phosphorus from the Metro WWTP effluent.

"Amendment No. 1 to Final Report Projected Flows and Loadings Metro Engineering Alternatives," (December 1992) provided a new alternative and offered a description of the County's plan for partial diversion of Metro sewage to the Baldwinsville Seneca Knolls WWTP. This option represented an innovative alternative for ammonia removal at Metro utilizing integrated fixed-film activated sludge (IFAS) technology.

Performance characteristics of engineering alternatives for phosphorus, ammonia and nitrogen removal were established in accordance with the May 1990 Work Plan, based on review of current plant performance data and the results of lab-scale, pilot-scale and full-scale studies published in the engineering literature. Alternatives evaluated for phosphorus removal included chemical precipitation in primary, secondary and/or tertiary treatment using iron salts (ferric chloride, ferrous chloride, ferrous sulfate), aluminum salts (alum, sodium aluminate), or lime. In addition, several biological phosphorus removal alternatives were considered. These included the Phostrip process, marketed by Biospherics, Inc.; the Bardenpho process, marketed by EIMCO Process Equipment Systems, Inc.; the A/O process, marketed by Air Products and Chemicals, Inc.; and the VIP process, patented for public usage by Hampton Roads Sanitation District and CH2M Hill.

- Draft water quality models developed by Upstate Freshwater Institute and funded by the NYSDEC were

November 16, 2000

I:\div135\projects\6064\25768\5\_rpts\finaleafp3.doc



made available for use in investigating the impacts of the various pollutant reduction alternatives on the water quality in Onondaga Lake. Through the use of these preliminary models, an alternative emerged which appeared to address the water quality objectives for the lake in a fiscally responsible manner. This alternative involved a phased approach to the elimination of the Metro discharge to Onondaga Lake, and was considered in the draft Municipal Compliance Plan (MCP) of January 1996.

In January 1996, a Draft Environmental Impact Statement (Draft DEIS) was submitted to the NYSDEC. The 1996 Draft DEIS was prepared as a supporting document to the Draft MCP - the County's proposal for improvements to the wastewater collection and treatment infrastructure. The 1996 Draft DEIS identified and evaluated several long-term alternatives for improvements to Metro, and presented the environmental and economic impacts associated with the proposed conceptual actions. This previous evaluation documented the development and screening of Metro engineering alternatives. The alternatives were evaluated for their effectiveness in addressing the contribution of Metro discharges to contravention of ambient water quality standards. Alternatives discussed in the 1996 Draft DEIS are summarized below:

**Metro Outfall Relocation** - Relocation of the Metro plant outfall for oxygenated deepwater discharge to the lake or for discharge to the Seneca River.

2. **Influent Flow Diversion** - Reduction of influent wastewater flows by diversion to other County-owned wastewater treatment facilities either alone or in combination with effluent diversion.
3. **No Action** - Continuation of existing (pre-ACJ) conditions for collection and treatment of the County's municipal wastewater (e.g., Metro effluent would continue to be discharged to the lake's upper waters at current levels of treatment for phosphorus, ammonia, biological oxygen demand (BOD), solids, and the other permitted parameters).

Under the "no action" alternative, the existing conditions for treatment of the County's municipal wastewater would continue. Metro effluent would continue to be discharged to the Lake's upper waters at current levels of treatment for phosphorus, ammonia, BOD, solids, and other permitted parameters. The ACJ effectively precludes the "no action" alternative. Fines could be imposed by the court for failure to produce and implement a viable plan to bring the County's waste treatment and collection system into compliance with state and federal requirements.

Review of the criteria indicated that emerging integrated fixed film activated sludge (IFAS) and BAF technologies warranted further evaluation. Ammonia stripping would require extensive capital and operating costs, as well as not being as reliable as the two above-listed technologies. Similarly, conventional aeration technologies would require extensive tankage that would be expensive and likely require land presently not available at the Metro site. The further evaluation of IFAS and BAF technologies was the subject of detailed discussions held between the parties of the ACJ as it was being developed between 1996 and 1998. These discussions involved review of the staged effluent limits versus technological capabilities. Based upon expected performance and pilot demonstration of BAF technology in NYC, the NYSDEC preferred BAF technology for ammonia removal.

Review of phosphorus removal alternatives in accordance with the selected screening criteria indicated that chemical addition with conventional filtration, advanced filtration and membrane technologies warranted further evaluation. Chemical addition and utilization of the existing tertiary clarifiers did not appear to be capable of achieving effluent requirements. Biological phosphorus removal was eliminated from consideration due to performance limitations (inability to achieve compliance with effluent limits) and cost considerations.

Discussions leading up to the 1998 ACJ resulted in the two-stage effluent limit requirement. Based upon this requirement, specific technologies were considered to meet the effluent requirements. The 1998 ACJ

required the County to conduct pilot demonstrations on BAF and phosphorus removal technologies to evaluate their effectiveness in meeting Stage II ammonia and Stage III phosphorus limits, with the intent that if these technologies were successful, full-scale facilities would be constructed. BAFs provided by the vendors IDI and USF Krüger were piloted. In 1999, it was determined by the County's project team that technologies warranting further evaluation for Stage II phosphorus removal included chemical addition and conventional filtration and HRFS. Based upon cost-effectiveness, land requirements and anticipated performance, HRFS technology was selected as the prime alternative to achieve Stage II phosphorus limits. A phosphorus removal pilot demonstration of two types of HRFS process technology (DensaDeg® and ACTIFLO®) was conducted in the first half of 2000. The pilot demonstration showed that both products were able to meet the Stage II phosphorus effluent limits prescribed in the ACJ.

An advanced phosphorus removal pilot demonstration is currently underway and is evaluating six proprietary process technologies as to feasibility, effectiveness and projected cost to achieve Stage III phosphorus effluent limits. An initial report on the results of the demonstration is expected by December 2000.

The ACJ required pilot testing of BAF technology to remove ammonia from Metro's effluent. The primary advantages of BAF systems when compared to conventional activated sludge systems, such as designed for ammonia removal, include the following:

1. reduced space requirements
2. improved treatment of cold and dilute wastewaters
3. rapid start-up
4. reliability and stability of operation
5. fully-automated operation.

Pilot scale BAF systems were obtained from two suppliers in the United States: Infilco Degremont, Inc. which markets the BIOFOR system; and Krüger, Inc. which markets the BIOSYR system.

A basis of design for the proposed treatment process was developed to achieve Stage II and Stage III effluent ammonia discharge limits utilizing tertiary BAF technology. As the design was developed, it became evident that significant treatment and cost savings benefits could be realized by combining the Stage II and III ammonia removal projects (BAF) with the Stage II phosphorus removal project using the HRFS process. The project also includes UV light-based disinfection to comply with a proposed SPDES permit modification limiting chlorine residual in effluent to 0.1 mg/l. By combining the Stage III Ammonia and Stage II Phosphorus projects into one, the scheduled time for Stage II phosphorus removal is expected to be accelerated by two years; therefore providing enhanced water quality sooner.

In addition, due in part to local interest to apply the most effective technologies/approaches at the least cost to the community, the County allocated County funds and entered into an agreement with the United States Army Corps of Engineers (ACOE) in late 1999 to assist the County in the preparation of a Request for Proposals (RFP) to undertake a design/build project for any one or all of the four major projects required in the ACJ including the Stage III ammonia/Stage II phosphorous removal project. Due to current NYS law, an action from the State Legislature was required to allow this municipal design/build program. Lack of adequate time to resolve concerns by State Legislators led to the ACOE withdrawing their funding and involvement in a process to solicit RFP's based on time constraints and the need to progress the various projects to meet ACJ milestones. Although the RFP process did not proceed, the County continued to review and evaluate alternative technologies and sites for the projects identified in the draft RFP – the Clinton, Midland and Harbor Brook CSO Abatement projects and the Ammonia/Phosphorus Removal project.



## EAF - Part 3

### Effluent Disinfection

The proposed SPDES permit modification includes a new total chlorine residual limit of 0.1 mg/l during seasonal disinfection (*i.e.*, April 1 to October 15). This limit is intended to reduce the toxicity associated with residual chlorine in the effluent. To achieve this chlorine residual limit, dechlorination facilities would be required immediately downstream of the chlorine contact facilities, or an alternative disinfection process would be required.

Due to the potential costs and operation requirements associated with providing dechlorination facilities for Outfalls 001 and 002, an evaluation of disinfection alternatives for these outfalls was conducted. A technical memorandum summarizing this alternative disinfection study was prepared for the County in 1999 and reviewed by NYSDEC. In summary, this evaluation concluded that the most advantageous (based on operation and maintenance requirements) and economical method of providing effluent disinfection for Outfall 001 is UV radiation; and due to the large fluctuations in flow and quality of wastewater through Outfall 002, continued chlorination (using sodium hypochlorite) with added dechlorination facilities, is the most appropriate and cost-effective means of disinfecting wet weather flows through Outfall 002.

### Alternative Layouts

Based upon the ammonia pilot results and in consideration of the benefits of HRFS technology, several site layouts at Metro were considered. Construction of proposed upgrade facilities on the Niagara Mohawk/Sewer Maintenance Building site was compared to the former plan for use of the tertiary clarifiers site. The siting of proposed ammonia and phosphorus removal facilities, originally depicted in the ACJ, included demolition of the six existing tertiary clarifiers and construction on the tertiary clarifier site. Data obtained and observations made during the BAF pilot testing established the need for continued operation of the tertiary clarifiers during construction of the BAFs to accommodate high flow periods.

Use of the tertiary clarifiers site would result in major disruption to the existing Metro operations and discharge permit violations. Additionally, constructability of the ammonia and phosphorus removal process systems on the tertiary clarifiers site would be significantly challenged because of the tight site conditions in and around the existing Metro operations. Demolition of the tertiary clarifiers would also add significantly to the cost of constructing the ammonia and phosphorus removal facilities. Simulation of short-term peaks in wastewater flow rate and secondary clarifier effluent suspended solids concentration representative of wet weather operating conditions resulted in significant increases in effluent BOD<sub>5</sub> and suspended solids concentrations. Currently, solids washed out of the secondary clarifiers are captured by the tertiary clarifiers such that the SPDES limits for effluent total suspended solids is met. As such, it was apparent that the tertiary clarifiers should remain in operation during construction and that the proposed facilities should be constructed on and adjacent to the Niagara Mohawk site.

As the County plans to acquire the Niagara Mohawk property adjacent to the plant head works, this site, in combination with the site of the existing Sewer Maintenance Building, provides sufficient space for the proposed facilities and, if necessary, future Stage III phosphorus removal facilities.

A siting evaluation was conducted to evaluate the tertiary clarifiers site and use of the Niagara Mohawk/Sewer Maintenance Building area for location of the new treatment facilities. The positive features of siting the proposed facilities at the combined Niagara Mohawk and Sewer Maintenance Building site include:

- The site has sufficient land area for the proposed facilities.
- 2 The site is in proximity to the secondary treatment effluent and the plant outfall

November 16, 2000

I:\div13\projects\6064\25768\5\_rpts\final\efpt3.doc

### **BAF - Part 3**

3. Construction at this site will have minimal impact on current plant operations.
4. The site is adjacent to Hiawatha Boulevard West which would allow for a site access entrance for construction vehicles if needed or desired (construction traffic would not have to pass through the main plant entrance). The need for a new or temporary site access entrance and traffic light will be considered during final design.

Utilization of site allows for operation of the existing tertiary clarifiers through construction.

6. Demolition of the tertiary clarifiers will not be necessary. However, the tertiary clarifiers will be decommissioned after the BAF/HRFS system begins operation.
7. The site of the existing tertiary clarifiers can be retained for future use and/or renovation and future uses of the existing tertiary clarifiers can be considered.
8. **Permanent access to the proposed facilities can be from existing plant roads.**
9. The site provides for sufficient parking and access necessary for facilities' operation and maintenance staff.
10. The site provides for sufficient area to expand if potential future phosphorus removal filters are constructed.

### **Conclusions**

Based on the results of the pilot demonstration projects and in accordance with the requirements of the ACJ, the County will implement BAF and HRFS technologies proven to be effective in meeting ACJ ammonia and phosphorus discharge limits. The County will also continue to investigate and evaluate treatment options to meet Stage III phosphorous effluent limits in Onondaga Lake and/or other options including diversion to the Seneca River to achieve the requirements of the ACJ.

*Potential impacts.* A summary of potential social, economic and environmental impacts is provided in EID Section 5 (Table 5). Evaluations including discussions of mitigation measures to reduce potential impacts and their significance are summarized below.

### **Affected Population**

The project will result in enhanced treatment of wastewater received from Metro service area communities such that the quality of discharges to Onondaga Lake will be improved. Improved quality of Metro discharges to Onondaga Lake will likewise benefit the County-wide population. Although the project will increase Metro's treatment capacity from 120 mgd to 126.3 mgd, it is not anticipated that the project will directly induce growth in the Metro service area.

### **Local Planning**

The County continues to work with local planners to develop programs consistent with and supportive of lakefront development plans.

### Community Cohesion

The project will be implemented on the Metro and adjacent Niagara Mohawk sites. No changes to neighborhoods, perceived impacts on the quality of life, population, or isolation of a portion of a neighborhood, ethnic group or low-income community will occur. Furthermore, since the condition of Onondaga Lake is an important topic within the community, completion of this project and realization of improved water quality should result in improved community cohesion.

### Environmental Justice

No environmental justice issues were identified based on the following considerations:

the project in its entirety on the existing Metro and contiguous Niagara Mohawk properties;

project-related activities are consistent with existing Metro operations; and

the project will benefit the entire community by improving the quality of Metro -related discharges to Onondaga Lake.

### Highway/Traffic Safety (Construction Phase)

The traffic will likely peak during concrete-related activities which will be significant due to the size and nature of the facilities. During this time, peak construction-related truck traffic is estimated to be approximately 6 to 8 trucks per hour during normal work hours. On-site staging of trucks, as well as off-peak scheduling of material deliveries, will be utilized to the extent practicable.

Site access routes will be identified by the contractor and coordinated with local highway and public safety officials. To further minimize potential traffic-related impacts at the existing Metro entrance, the existing Niagara Mohawk site driveway along Hiawatha Boulevard (at intersection with Van Rensselaer Street) will be utilized as a construction entrance.

It will be the responsibility of the contractor to maintain safe and continuous through traffic, ingress and egress throughout the period of construction. A maintenance and protection of traffic (MPT) plan complying with local guidelines and the New York State Manual of Uniform Traffic Control Devices (MUTCD) will be utilized and implemented. The project manager will be responsible for enforcing MPT plan provisions.

### Highway/Traffic Safety (Operation Phase)

Proposed operations will not significantly affect existing staffing requirements, or vehicles accessing and egressing the Metro facility. Based on minimal staffing projections, approximately 10± additional trips are estimated for the weekday morning and evening peak hours. Based on this anticipated minimal increase in trips, as well as the existing capacity of Hiawatha Boulevard and Pulaski Street, the project will not result in significant trips that would lead to social impacts of increased traffic congestion or substantial changes to pedestrian trip generators and destinations. Consequently, no modifications to the existing entrance or signalized intersection are warranted. Also, since the plans for the expansion of the Carousel Center include closing Hiawatha Boulevard to through traffic, it could be expected that, if the expansion occurs, that traffic on Hiawatha Boulevard West will decrease over current conditions.

### Impacts to Geologic Resources

Temporary disruptions of soil profiles within the project area will occur as a result of site clearing, grading, excavation and trenching operations associated with construction phase activities (e.g., installation of utilities, construction of facilities). In addition, clearing of vegetation and stockpiling of excavated soil will minimally increase the potential for erosion and sedimentation by exposing bare, unvegetated soils to storm water runoff. The potential for these impacts to occur is considered short-term and can be mitigated using industry-specific erosion and sedimentation controls (E&SCs).

No potential long-term erosion and sedimentation impacts are anticipated. While permanent loss of existing vegetation will occur within the project area as a result of the placement and maintenance of facilities, replacement ground cover (e.g., grass and other replacement vegetation, buildings/structures or pavement) will be established in its place to prevent erosion of soils.

Standard construction industry stabilization practices (described in the EID) will be implemented to minimize soil erosion. Mitigation measures will be incorporated into both design and construction phases.

An E&SC plan will be prepared for the construction phase. The E&SC plan will be developed in accordance with the "Guidelines for Urban Erosion and Sediment Control".

### Water Resources

The project is being implemented to improve the quality of wastewater effluent discharges to Onondaga Lake (i.e., based on ACJ-mandated levels of ammonia and, phosphorus, and SPDES permit-regulated chlorine residual). Based on the County's accelerated implementation schedule, both the ACJ-mandated Stage III Ammonia and Stage II Phosphorus effluent discharge limits will be met by May 1, 2004. Reducing Metro ammonia and phosphorus discharges to the lake will facilitate:

increased lake water clarity;

improved lake habitat; and

improved lake aesthetic qualities (i.e., visual and odors).

Ground water identified by Niagara Mohawk as being impacted may require special handling. Impacted soils and ground water encountered during construction activities will be managed off-site in accordance with applicable regulations, as well as Niagara Mohawk's IRM Work Plan. Furthermore, removal and off-site management of impacted soils encountered during construction activities will remove a potential future source of ground and surface water contamination.

Mitigation will be established to minimize the potential for significant impacts to adjacent surface waters (e.g., the Lake and Barge Canal) from storm water discharge during operation and construction phases of the project. Under developed conditions, storm water will be collected with a closed system (e.g., roof drains, catch basins and piping) to be conveyed to the existing on-site storm water management system. The system will be designed sufficiently to control the rate of runoff such that it does not exceed pre-development rates for the 2, 10, and 100-year, 24-hour storm events. Potential construction phase impacts to storm water will also be mitigated. An E&SC Plan to control erosion and sedimentation during construction would be implemented by the contractor. The E&SC plan would include, as necessary, temporary and permanent structural and non-structural measures including: silt fencing, stabilized construction entrances, filter fabric and stone, stone check dams with temporary and permanent diversion swales, sediment basins or protected drop inlets, and temporary sediment traps.

November 16, 2000

I:\div13S\projects\6064\25768\5\_rpts\finaleafp3.doc

32

09/28/00	DESIGNED BY	CHECKED BY	FILE NO. 6064.25768	21
	DRAWN BY	DATE SEPT. 2000		